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**“जानने का अधिकार, जीने का अधिकार”**

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

**“पुराने को छोड़ नये के तरफ”**

Jawaharlal Nehru

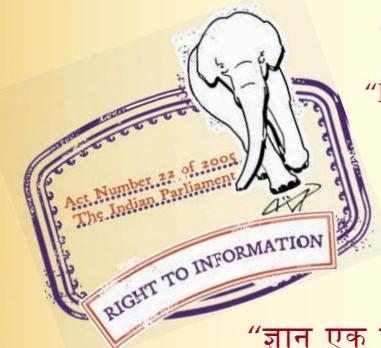
“Step Out From the Old to the New”

IS 11243 (1985): Thoraco-lumbo-sacral Flexion-extension and Lateral-flexion Control Brace [MHD 10: Medical Laboratory Instruments]

**“ज्ञान से एक नये भारत का निर्माण”**

Satyanaaran Gangaram Pitroda

“Invent a New India Using Knowledge”



**“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”**

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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Indian Standard

## SPECIFICATION FOR THORACO-LUMBO-SACRAL FLEXION-EXTENSION AND LATERAL-FLEXION CONTROL BRACE

**1. Scope** — Covers dimensional and functional requirements of thoraco-lumbo-sacral flexion-extension and lateral-flexion control brace to control flexion extension and lateral flexion movement of the thoraco-lumbo-sacral spine.

### 2. Shape and Dimensions

**2.1** Thoraco-lumbo-sacral flexion-extension and lateral-flexion control brace shall consist of the following components:

- a) Pelvic band,
- b) Thoracic band,
- c) Posterior upright (2 Nos),
- d) Lateral uprights (2 Nos),
- e) Inter-scapular band, and
- f) Abdominal support.

**2.2** The brace shall be made in 3 sizes. The dimensions of the components, as given in Table 1, have been specified for guidance only.

**TABLE 1 DIMENSIONS OF COMPONENTS FOR BRACES**

| Sl. No. | Item                             | Size                  | Thickness         |                   | Width          |                | Length<br>Mild Steel and<br>Aluminium both<br>mm |
|---------|----------------------------------|-----------------------|-------------------|-------------------|----------------|----------------|--|
|         |                                  |                       | Mild<br>Steel     | Aluminium         | Mild<br>Steel  | Aluminium      |  |
|         |                                  |                       | mm                | mm                | mm             | mm             |  |
|         |                                  |                       | ±0.05             | ±0.05             | ±2             | ±2             |  |
| 1)      | Pelvic band and<br>thoracic band | Small<br>Med<br>Large | 1.2<br>1.6<br>1.6 | 1.6<br>2.0<br>2.0 | 25<br>28<br>28 | 40<br>45<br>45 | 380±50<br>480±50<br>550±50                       |
| 2)      | Posterior<br>uprights            | Small<br>Med<br>Large | 1.2<br>1.6<br>1.6 | 1.6<br>2.0<br>2.0 | 18<br>21<br>21 | 18<br>21<br>21 | 350±50<br>450±50<br>550±50                       |
| 3)      | Lateral<br>uprights              | Small<br>Med<br>Large | 1.2<br>1.6<br>1.6 | 2.0<br>2.0<br>2.0 | 18<br>21<br>21 | 18<br>21<br>21 | 150±50<br>200±50<br>250±50                       |
| 4)      | Inter<br>scapular<br>band        | Small<br>Med<br>Large | 1.2<br>1.6<br>1.6 | 2.0<br>2.0<br>2.0 | 18<br>21<br>21 | 18<br>21<br>21 | 150±50<br>200±50<br>250±50                       |

**3. Material** — Materials used for different components shall be such as to meet the desired functionality of the components. Recommended typical materials are as follows. However material having better properties may also be used for the purpose.

**3.1 a) Pelvic band thoracic band and  
lateral uprights**

Mild steel conforming to designation O-1079 of IS : 1079-1973 'Specification for hot rolled carbon steel sheet and strip (third revision)', or aluminium alloy conforming to designation 24345 WP of IS : 737-1974 'Specification for wrought aluminium and aluminium alloys, sheet and strip (for general engineering purposes) (second revision)'.

|   |  |
|---|--|
| b) Lumbo sacral posterior uprights interscapular band | Mild steel conforming to designation ST34-1079 of IS : 1079-1973 or high carbon steel conforming to designation C98 of IS : 1570 ( Part II )-1979 Indian Standard Schedules for wrought Steels : Part II Carbon steels ( unalloyed steels ) ( <i>first revision</i> )' or aluminium alloy conforming to designation 24345 WP of IS : 737-1974. |
| c) Fasteners  | Suitable fasteners such as buckles ( See IS : 4274-1981 Specification for buckles ), hook and loop tape synthetic fastners See IS : 8156-1981 'Specification for fasteners, hook and loop tape, synthetic ( <i>first revision</i> )'.  |
| d) Abdominal Support                                  | Shall be made from poplin, drill satin or gabbardin, reinforced with canvass cloth and plastic stiffners or any other material as agreed to between the manufacturer and the purchaser.  |

#### **4. Workmanship and Finish**

**4.1** The pelvic band, the thoracic band, interscapular band, the lumbosacral posterior uprights, and the lateral uprights shall be free from sharp edges and corners. All the edges shall be rounded off.

**4.2** The thoracic band shall be fitted at such a level so that it does not interfere with the scapular movements.

**4.3** There shall be an overlap of minimum 100 mm between the two flaps of the abdominal support.

**4.4** The assembly of the brace shall be done with mild steel flat head rivets ( diameter 3 mm *Min* ) and the ends shall be rivet-snapped smoothly.

**4.5** The brace shall be provided with soft inner lining ( preferably suede leather ) with felt cushioning ( 6 mm thick superior quality felt ) and straps for thoracic and pelvic bands with 30 mm  $\pm$  5 mm velcro straps. The brace shall not cause any discomfort when the patient is in sitting position.

**4.6** An axillary strap shall be made out of soft leather lining and soft felt cushion shoulderpad.

#### **5. Marking — The package containing the brace shall be marked with the following:**

- i) Manufacturer's name and initials or recognized trade-mark; and
- ii) Size, mentioning the length of pelvic band, thoracic band and posterior uprights.

**5.1 ISI Certification Marking — Details available with the Indian Standards Institution.**

**6. Packing — As agreed to between the purchaser and the supplier. The brace may also be packed in the kit form.**